

#7

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/532,050

Source: PCR

Date Processed by STIC: 4/27/05

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 04/27/2005

PATENT APPLICATION: US/10/532,050

TIME: 09:58:41

Input Set : N:\Crf4\Refhold\PCT_folder\PU28654A.raw

Output Set: N:\CRF4\04272005\J532050.raw

```

1 <110> APPLICANT: Behrens, Sven-Erik
2     Isken, Olaf
3     Grassmann, Claus W.
4     Sarisky, Robert T.
5 <120> TITLE OF INVENTION: A Set Of Ubiquitous Cellular Proteins
6     Involved in Viral Life Cycle
7 <130> FILE REFERENCE: P51375
C--> 8 <140> CURRENT APPLICATION NUMBER: US/10/532,050
C--> 9 <141> CURRENT FILING DATE: 2005-03-11
10 <150> PRIOR APPLICATION NUMBER: PCT/US03/28654
11 <151> PRIOR FILING DATE: 2003-09-12
12 <150> PRIOR APPLICATION NUMBER: 60/410,460
13 <151> PRIOR FILING DATE: 2002-09-13
14 <160> NUMBER OF SEQ ID NOS: 8
15 <170> SOFTWARE: FastSEQ for Windows Version 4.0
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 1270
19 <212> TYPE: PRT
20 <213> ORGANISM: Homo sapien
21 <400> SEQUENCE: 1
22     Met Gly Asp Val Lys Asn Phe Leu Tyr Ala Trp Cys Gly Lys Arg Lys
23         1             5             10             15
24     Met Thr Pro Ser Tyr Glu Ile Arg Ala Val Gly Asn Lys Asn Arg Gln
25         20             25             30
26     Lys Phe Met Cys Glu Val Gln Val Glu Gly Tyr Asn Tyr Thr Gly Met
27         35             40             45
28     Gly Asn Ser Thr Asn Lys Lys Asp Ala Gln Ser Asn Ala Ala Arg Asp
29         50             55             60
30     Phe Val Asn Tyr Leu Val Arg Ile Asn Glu Ile Lys Ser Glu Glu Val
31         65             70             75             80
32     Pro Ala Phe Gly Val Ala Ser Pro Pro Pro Leu Thr Asp Thr Pro Asp
33         85             90             95
34     Thr Thr Ala Asn Ala Glu Gly Asp Leu Pro Thr Thr Met Gly Gly Pro
35         100            105            110
36     Leu Pro Pro His Leu Ala Leu Lys Ala Glu Asn Asn Ser Glu Val Gly
37         115            120            125
38     Ala Ser Gly Tyr Gly Val Pro Gly Pro Thr Trp Asp Arg Gly Ala Asn
39         130            135            140
40     Leu Lys Asp Tyr Tyr Ser Arg Lys Glu Glu Gln Glu Val Gln Ala Thr
41         145            150            155            160
42     Leu Glu Ser Glu Glu Val Asp Leu Asn Ala Gly Leu His Gly Asn Trp
43         165            170            175
44     Thr Leu Glu Asn Ala Lys Ala Arg Leu Asn Gln Tyr Phe Gln Lys Glu

```

DATE: 04/27/2005

PATENT APPLICATION: US/10/532,050

TIME: 09:58:41

Input Set : N:\Crf4\Refhold\PCT folder\PU28654A.raw

Output Set: N:\CRF4\04272005\J532050.raw

45																
46	Lys	Ile	Gln	Gly	Glu	Tyr	Lys	Tyr	Thr	Gln	Val	Gly	Pro	Asp	His	Asn
47				195				200					205			
48	Arg	Ser	Phe	Ile	Ala	Glu	Met	Thr	Ile	Tyr	Ile	Lys	Gln	Leu	Gly	Arg
49			210				215					220				
50	Arg	Ile	Phe	Ala	Arg	Glu	His	Gly	Ser	Asn	Lys	Lys	Leu	Ala	Ala	Gln
51			225				230					235				240
52	Ser	Cys	Ala	Leu	Ser	Leu	Val	Arg	Gln	Leu	Tyr	His	Leu	Gly	Val	Val
53					245					250					255	
54	Glu	Ala	Tyr	Ser	Gly	Leu	Thr	Lys	Lys	Lys	Glu	Gly	Glu	Thr	Val	Glu
55				260				265						270		
56	Pro	Tyr	Lys	Val	Asn	Leu	Ser	Gln	Asp	Leu	Glu	His	Gln	Leu	Gln	Asn
57			275					280					285			
58	Ile	Ile	Gln	Glu	Leu	Asn	Leu	Glu	Ile	Leu	Pro	Pro	Pro	Glu	Asp	Pro
59			290				295					300				
60	Ser	Val	Pro	Val	Ala	Leu	Asn	Ile	Gly	Lys	Leu	Ala	Gln	Phe	Glu	Pro
61			305				310					315				320
62	Ser	Gln	Arg	Gln	Asn	Gln	Val	Gly	Val	Val	Pro	Trp	Ser	Pro	Pro	Gln
63					325					330					335	
64	Ser	Asn	Trp	Asn	Pro	Trp	Thr	Ser	Ser	Asn	Ile	Asp	Glu	Gly	Pro	Leu
65				340					345					350		
66	Ala	Phe	Ala	Thr	Pro	Glu	Gln	Ile	Ser	Met	Asp	Leu	Lys	Asn	Glu	Leu
67			355					360				365				
68	Met	Tyr	Gln	Leu	Glu	Gln	Asp	His	Asp	Leu	Gln	Ala	Ile	Leu	Gln	Glu
69			370				375					380				
70	Arg	Glu	Leu	Leu	Pro	Val	Lys	Lys	Phe	Glu	Ser	Glu	Ile	Leu	Glu	Ala
71			385				390					395				400
72	Ile	Ser	Gln	Asn	Ser	Val	Val	Ile	Ile	Arg	Gly	Ala	Thr	Gly	Cys	Gly
73				405						410					415	
74	Lys	Thr	Thr	Gln	Val	Pro	Gln	Phe	Ile	Leu	Asp	Asp	Phe	Ile	Gln	Asn
75				420					425					430		
76	Asp	Arg	Ala	Ala	Glu	Cys	Asn	Ile	Val	Val	Thr	Gln	Pro	Arg	Arg	Ile
77			435					440					445			
78	Ser	Ala	Val	Ser	Val	Ala	Glu	Arg	Val	Ala	Phe	Glu	Arg	Gly	Glu	Glu
79			450					455				460				
80	Pro	Gly	Lys	Ser	Cys	Gly	Tyr	Ser	Val	Arg	Phe	Glu	Ser	Ile	Leu	Pro
81			465				470					475				480
82	Arg	Pro	His	Ala	Ser	Ile	Met	Phe	Cys	Thr	Val	Gly	Val	Leu	Leu	Arg
83					485					490					495	
84	Lys	Leu	Glu	Ala	Gly	Ile	Arg	Gly	Ile	Ser	His	Val	Ile	Val	Asp	Glu
85				500					505					510		

RAW SEQUENCE LISTING

DATE: 04/27/2005

PATENT APPLICATION: US/10/532,050

TIME: 09:58:41

Input Set : N:\Crf4\Refhold\PCT_folder\PU28654A.raw

Output Set: N:\CRF4\04272005\J532050.raw

```

94   Asp Cys Ile Gln Met Thr His Phe Val Pro Pro Pro Lys Asp Lys Lys
95           580           585           590
96   Lys Lys Asp Lys Asp Asp Asp Gly Gly Glu Asp Asp Asp Ala Asn Cys
97           595           600           605
98   Asn Leu Ile Cys Gly Asp Glu Tyr Gly Pro Glu Thr Arg Leu Ser Met
99           610           615           620
100  Ser Gln Leu Asn Glu Lys Glu Thr Pro Phe Glu Leu Ile Glu Ala Leu
101  625           630           635           640
102  Leu Lys Tyr Ile Glu Thr Leu Asn Val Pro Gly Ala Val Leu Val Phe
103           645           650           655
104  Leu Pro Gly Trp Asn Leu Ile Tyr Thr Met Gln Lys His Leu Glu Met
105           660           665           670
106  Asn Pro His Phe Gly Ser His Arg Tyr Gln Ile Leu Pro Leu His Ser
107           675           680           685
108  Gln Ile Pro Arg Glu Glu Gln Arg Lys Val Phe Asp Pro Val Pro Val
109           690           695           700
110  Gly Val Thr Lys Val Ile Leu Ser Thr Asn Ile Ala Glu Thr Ser Ile
111  705           710           715           720
112  Thr Ile Asn Asp Val Val Tyr Val Ile Asp Ser Cys Lys Gln Lys Val
113           725           730           735
114  Lys Leu Phe Thr Ala His Asn Asn Met Thr Asn Tyr Ser Thr Val Trp
115           740           745           750
116  Ala Ser Lys Thr Asn Leu Glu Gln Arg Lys Gly Arg Ala Gly Arg Ser
117           755           760           765
118  Thr Ala Gly Phe Cys Phe His Leu Cys Ser Arg Ala Arg Phe Glu Arg
119           770           775           780
120  Leu Glu Thr His Met Thr Pro Glu Met Phe Arg Thr Pro Leu His Glu
121  785           790           795           800
122  Ile Ala Leu Ser Ile Lys Leu Leu Arg Leu Gly Gly Ile Gly Gln Phe
123           805           810           815
124  Leu Ala Lys Ala Ile Glu Pro Pro Pro Leu Asp Ala Val Ile Glu Ala
125           820           825           830
126  Glu His Thr Leu Arg Glu Leu Asp Ala Leu Asp Ala Asn Asp Glu Leu
127           835           840           845
128  Thr Pro Leu Gly Arg Ile Leu Ala Lys Leu Pro Ile Glu Pro Arg Phe
129           850           855           860
130  Gly Lys Met Met Ile Met Gly Cys Ile Phe Tyr Val Gly Asp Ala Ile
131  865           870           875           880
132  Cys Thr Ile Ala Ala Thr Cys Phe Pro Glu Pro Phe Ile Asn Glu
133           885           890           895
134  Gly Lys Arg Leu Gly Tyr Ile His Arg Asn Phe Ala Gly Asn Arg Phe
135           900           905           910
136  Ser Asp His Val Ala Leu Leu Ser Val Phe Gln Ala Trp Asp Asp Ala
137           915           920           925
138  Arg Met Gly Gly Glu Glu Ala Glu Ile Arg Phe Cys Glu His Lys Arg
139           930           935           940
140  Leu Asn Met Ala Thr Leu Arg Met Thr Trp Glu Ala Lys Val Gln Leu
141  945           950           955           960
142  Lys Glu Ile Leu Ile Asn Ser Gly Phe Pro Glu Asp Cys Leu Leu Thr

```

RAW SEQUENCE LISTING

DATE: 04/27/2005

PATENT APPLICATION: US/10/532,050

TIME: 09:58:41

Input Set : N:\Crf4\Refhold\PCT_folder\PU28654A.raw

Output Set: N:\CRF4\04272005\J532050.raw

```

143          965          970          975
144 Gln Val Phe Thr Asn Thr Gly Pro Asp Asn Asn Leu Asp Val Val Ile
145          980          985          990
146 Ser Leu Leu Ala Phe Gly Val Tyr Pro Asn Val Cys Tyr His Lys Glu
147          995          1000          1005
148 Lys Arg Lys Ile Leu Thr Thr Glu Gly Arg Asn Ala Leu Ile His Lys
149          1010          1015          1020
150 Ser Ser Val Asn Cys Pro Phe Ser Ser Gln Asp Met Lys Tyr Pro Ser
151          1025          1030          1035          1040
152 Pro Phe Phe Val Phe Gly Glu Lys Ile Arg Thr Arg Ala Ile Ser Ala
153          1045          1050          1055
154 Lys Gly Met Thr Leu Val Pro Pro Leu Gln Leu Leu Leu Phe Ala Ser
155          1060          1065          1070
156 Lys Lys Val Gln Ser Asp Gly Gln Ile Val Leu Val Asp Asp Trp Ile
157          1075          1080          1085
158 Lys Leu Gln Ile Ser His Glu Ala Ala Ala Cys Ile Thr Gly Leu Arg
159          1090          1095          1100
160 Ala Ala Met Glu Ala Leu Val Val Glu Val Thr Lys Gln Pro Ala Ile
161          1105          1110          1115          1120
162 Ile Ser Gln Leu Asp Pro Val Asn Glu Arg Met Leu Asn Met Ile Arg
163          1125          1130          1135
164 Gln Ile Ser Arg Pro Ser Ala Ala Gly Ile Asn Leu Met Ile Gly Ser
165          1140          1145          1150
166 Thr Arg Tyr Gly Asp Gly Pro Arg Pro Pro Lys Met Ala Arg Tyr Asp
167          1155          1160          1165
168 Asn Gly Ser Gly Tyr Arg Arg Gly Gly Ser Ser Tyr Ser Gly Gly Gly
169          1170          1175          1180
170 Tyr Gly Gly Gly Tyr Ser Ser Gly Gly Tyr Gly Ser Gly Gly Tyr Gly
171          1185          1190          1195          1200
172 Gly Ser Ala Asn Ser Phe Arg Ala Gly Tyr Gly Ala Gly Val Gly Gly
173          1205          1210          1215
174 Gly Tyr Arg Gly Val Ser Arg Gly Gly Phe Arg Gly Asn Ser Gly Gly
175          1220          1225          1230
176 Asp Tyr Arg Gly Pro Ser Gly Gly Tyr Arg Gly Ser Gly Gly Phe Gln
177          1235          1240          1245
178 Arg Gly Gly Gly Arg Gly Ala Tyr Gly Thr Gly Tyr Phe Gly Gln Gly
179          1250          1255          1260
180 Arg Gly Gly Gly Gly Tyr
181          1265          1270
183 <210> SEQ ID NO: 2
184 <211> LENGTH: 3810
185 <212> TYPE: DNA
186 <213> ORGANISM: Homo sapien
187 <400> SEQUENCE: 2
188 atgggtgacg ttaaaaattt tctgtatgcc tgggtgtggca aaaggaagat gaccccatcc 60
189 tatgaaatta gagcagtggg gaacaaaaac aggcagaaat tcatgtgtga gggttcaggtg 120
190 gaaggttata attacactgg catgggaaat tccaccaata aaaaagatgc acaaagcaat 180
191 gctgccagag actttgttaa ctatttggtt cgaataaatg aaataaagag tgaagaagtt 240
192 ccagcttttg gggtagcatc tccgccccca cttactgata ctctgacac tacagcaaat 300

```

RAW SEQUENCE LISTING

DATE: 04/27/2005

PATENT APPLICATION: US/10/532,050

TIME: 09:58:41

Input Set : N:\Crf4\Refhold\PCT_folder\PU28654A.raw

Output Set: N:\CRF4\04272005\J532050.raw

```

193 gctgaaggag atttaccaac aaccatggga ggacctcttc ctccacatct ggctctcaaa 360
194 gcagaaaata attctgaggt aggggcctct ggctatggtg ttcttgggcc cacctgggac 420
195 cgaggagcca acttgaagga ttactactca agaaaggaag aacaagaagt gcaagcgact 480
196 ctagaatcag aagaagtgga tttaaatgct gggcttcatg gaaactggac cttggaaaat 540
197 gctaaagctc gtctaaacca atattttcag aaagaaaaga tccaaggaga atataagtac 600
198 acccaagtgg gtctgatca caacaggagc ttatttcag aaatgacct ttatatcaag 660
199 cagctgggca gaaggatttt tgcacgagaa catggatcaa ataagaaatt ggcagcacag 720
200 tctgtggccc tgtcacttgt cagacaactg taccatcttg gagtgggtga agcttactcc 780
201 ggactttacaa agaagaagga aggagagaca gtggagcctt acaaagtaaa cctctctcaa 840
202 gatttagagc atcagctgca aaacatcatt caagagctaa atcttgagat tttgcccccg 900
203 cctgaagatc cttctgtgcc agttgcactc aacattggca aattggctca gttcgaacca 960
204 tctcagcgac aaaaccaagt ggggtgtggtt ccttgggtcac ctccacaatc caactggaat 1020
205 ccttggacta gtagcaacat tgatgagggg cctctggctt ttgctactcc agagcaaata 1080
206 agcatggacc tcaagaatga attgatgtac cagttggaac aggatcatga tttgcaagca 1140
207 atcttgagg agagagagtt actgcctgtg aagaaatttg aaagtgagat tctggaagca 1200
208 atcagccaaa attcagttgt cattattaga ggggctactg gatgtgggaa aaccacacag 1260
209 gttccccagt tcattctaga tgactttatc cagaatgacc gagcagcaga gtgtaacatc 1320
210 gtagtaactc agcccagaag aatcagtgcg gtttctgtgg cagagcgagt tgcatttgaa 1380
211 agaggagaag agcctggaaa aagctgtggc tacagcgctc gatttgagtc tatacttctt 1440
212 cgtcctcatg ccagtataat gttttgtact gtaggtgtgc tcttgagaaa attagaagca 1500
213 ggcattcgag gaatcagtca tgaattgta gatgaaatac atgaaagaga tattaatact 1560
214 gacttctctc tggtagtact gcgtgatgtt gttcaggctt atcctgaagt tcgcattgtt 1620
215 cttatgtctg ctactattga taccagcatg ttttgtgaat atttcttcaa ttgccccatc 1680
216 attgaagttt atgggaggac ttaccagtt caagaatatt ttctggaaga ctgcattcag 1740
217 atgaccact ttgttctctc accaaaagac aaaaagaaga aggataagga tggatggtt 1800
218 ggtgaggatg atgatgcaaa ttgcaacttg atctgtggtg atgaatatgg tccagaaaca 1860
219 aggttgagca tgtctcaatt gaacgaaaag gaaactcctt ttgaactcat cgaggctcta 1920
220 cttaagtaca ttgaaacct taatgttctt ggagctgtgt tgggtttttt gcttggctgg 1980
221 aatctgattt atactatgca gaagcatttg gaaatgaatc cacatttttg aagccatcgg 2040
222 tatcagattc taccctgca ttctcagatt cctcgagagg aacagcgcaa agtgtttgat 2100
223 ccagtaccag ttggagtaac caaggttatt ttgtccacaa atattgctga aacaagcatt 2160
224 accataaacg atgttggtta tgtcattgac tctgcaagc agaaagtga actcttact 2220
225 gctcacaaca atatgaccaa ctattctacc gtatgggcat caaaaacaaa ccttgagcaa 2280
226 cggaaagggc gagctggccg gagtacggct ggattctgct ttcacctgtg cagccgagct 2340
227 cgttttgaga gacttgaaac ccacatgaca ccagagatgt tccgaacacc attgcatgaa 2400
228 attgctctta gcataaaact tctgcgtcta ggaggaattg gccaatctt ggccaaagca 2460
229 attgaacctc cccctttgga tgetgtgatt gaagcagaac acactcttag agagcttgat 2520
230 gcattagatg ccaatgatga gttgactcct ttgggacgaa tcttggttaa actccccatt 2580
231 gagcctcggt ttggcaaaaat gatgataatg ggggtgattt tctacgtggg agatgctatc 2640
232 tgtaccattg ctgctgctac ctgctttcca gagcctttca tcaatgaagg aaagcggctg 2700
233 ggctatatcc atcgaaattt tgcaggaaac agattttctg atcacgtagc ccttttatca 2760
234 gtattccaag cctgggatga tgctagaatg ggtggagaag aagcagagat acgtttttgt 2820
235 gagcacaaaa gacttaatat ggctacacta agaatgacct gggaagccaa agttcagctc 2880
236 aaagagattt tgattaattc tgggtttcca gaagattgtt tgttgacaca agtgtttact 2940
237 aacactggac cagataataa tttggatgtt gttatctccc tcttggcctt tgggtgtgtac 3000
238 cccaatgtat gctatcataa ggaaaagagg aagatttctc cactgaagg gcgtaatgca 3060
239 cttatccaca aatcatctgt taattgtcct tttagtagcc aagacatgaa gtacccatct 3120
240 cccttctttg tatttggtga aaagattcga actcgagcca tctctgctaa aggcattgact 3180
241 ttagtaccac cctgcagtt gcttctcttt gcctccaaga aagtcacatc tgatgggcag 3240

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/532,050

DATE: 04/27/2005

TIME: 09:58:42

Input Set : N:\Crf4\Refhold\PCT_folder\PU28654A.raw

Output Set: N:\CRF4\04272005\J532050.raw

L:8 M:270 C: Current Application Number differs, Replaced Current Application Number

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date